This listing of claims will replace all prior versions, and listings, of claims in the application:

IN THE CLAIMS

Claim 1(currently amended): A method for controlling a welding process using a melting welding wire (3), wherein a welding process adjusted on the basis of several different welding parameters and controlled by a control device and/or a welding current source is carried out after the ignition of an electric arc, ~~characterized in that~~ wherein at least one mechanical adjustment process (41) is carried out during the welding process to determine the position of the welding wire (13), using the welding wire (13) as a sensor.

Claim 2 (currently amended): A method according to claim 1, wherein ~~characterized in that~~, during the mechanical adjustment process (41), the welding parameters and, in particular, the welding current (I) are controlled in a manner that no or only little welding wire material melting is effected.

Claim 3 (currently amended): A method according to ~~claim 1 or 2, characterized in that~~ claim 1, wherein, during the mechanical adjustment process (41), contacting of the welding wire (13) with the workpiece (16) is effected by moving the welding wire (13) towards the workpiece (16).

Claim 4 (currently amended): A method according to claim 3, ~~characterized in that~~ wherein, during the movement of the welding wire (13) towards the workpiece (16), the welding parameters are controlled in a manner that the electric arc (15) is maintained until immediately before the contacting of the welding wire (13) with the workpiece (16) while avoiding melting of the welding wire (13)

Claim 5 (currently amended): A method according to ~~claim 3 or 4, characterized in that~~ claim 3, wherein contacting of the welding wire (13) with the workpiece (16) is detected via the recognition of a short circuit.

Claim 6 (currently amended): A method according to claim 5, ~~characterized in that~~ wherein, after the detection of said contacting, the position of the end of the welding wire is newly initialized and, in particular, reset to zero.

Claim 7 (currently amended): A method according to ~~one or several of claims 3 to 6, characterized in that~~ claim 3, wherein, the welding wire (13) is moved back after contacting with the workpiece (16)

Claim 8 (currently amended): A method according to ~~one or several of claims 3 to 7, characterized in that~~ claim 3, wherein, after contacting of the welding wire (13) with the workpiece (16), the welding wire 13 is moved away from the workpiece (16) to a fixedly pregiven or adjustable distance (32), preferably 2 mm to 6 mm, relative to the same.

Claim 9 (currently amended): A method according to claim 8, ~~characterized in that~~ wherein said distance (32) is determined via the welding voltage (U), the welding current (I) or the time (t) during the movement of the welding wire (13).

Claim 10 (currently amended): A method according to ~~one or several of claims 1 to 9, characterized in that~~ claim 1, wherein the mechanical adjustment process (41) is initiated by settings selected by the user or by fixed defaults.

Claim 11 (currently amended): A method according to ~~one or several of claims 1 to 10, characterized in that~~ claim 1, wherein the mechanical adjustment process (41) is initiated by a trigger signal, for instance a threshold value for the welding voltage (U).

Claim 12 (currently amended): A method according to ~~one or several of claims 1 to 10, characterized in that~~ claim 1,

wherein the mechanical adjustment process (41) is initiated at defined times, after the expiration of defined time intervals or after the expiration of a defined number of welding process pulses.

Claim 13 (currently amended): A method according to ~~one or several of claims 1 to 12, characterized in that~~ claim 1, wherein the wire advance speed (V) is increased during the mechanical adjustment process (41).

Claim 14 (currently amended): A method according to ~~one or several of claims 1 to 13, characterized in that~~ claim 1, wherein the mechanical adjustment process (41) is carried out during a base current phase (35) of the welding process, i.e., between two pulses of the welding process.

Claim 15 (currently amended): A method according to claim 1, wherein ~~one or several of claims 1 to 14,characterized in that~~

the length of the welding wire (13) through which welding current flows is measured during the mechanical adjustment process (41).

Claim 16 (currently amended): A method according to ~~one or several of claims 1 to 15, characterized in that~~ claim 1, wherein the electric arc (15) is newly ignited during the mechanical adjustment process (41) as the welding wire (13) is lifted off the workpiece (16).

Claim 17 (currently amended): A method according to ~~one or several of claims 1 to 15, characterized in that~~ claim 1, wherein the electric arc (15) is newly ignited during the mechanical adjustment process (41) as the desired distance (32) is reached.

Claim 18 (currently amended): A method according to ~~one or several of claims 1 to 17, characterized in that~~ claim 1, wherein a mechanical adjustment process (41) is carried out at

the beginning of the welding process.

Claim 19 (currently amended): A method according to ~~one or several of claims 1 to 18, characterized in that~~ claim 1, wherein a mechanical adjustment process (41) is carried out at the end of the welding process so as to enable the adjustment of a defined distance (32) of the end of the welding wire relative to the workpiece (16) for the subsequent welding process.

Claim 20 (currently amended): A method according to ~~one or several of claims 1 to 19, characterized in that~~ claim 1, wherein the position of the welding wire (13) determined during the mechanical adjustment process (41), and optionally the determined length of the welding wire (13) through which welding current flows, are transmitted to a robot control.